

CLAIMS

What is claimed is:

Claim 1

1 A telemetry system for use in test firing a guided missile,
2 where said missile has a plurality of configurations distinguished
3 by a unique fuze and guidance control section combination,
4 each of said configurations producing a plurality of characteristic
5 telmetry signals reflecting the operation of said missile
6 configuration and requiring correspondingly unique signal
7 processing prior to being transmitted from said telemetry
8 system, comprising:

9 common signal conditioning means, for receiving and
10 processing said characteristic telemetry signals from
11 the one of said unique fuze and guidance control section
12 combinations utilized in a missile firing and for
13 producing processed signals which reflect the operation
14 of said utilized combination, said common signal
15 conditioning means compatible for use with any of
16 said plurality of missile configurations;

17 interface means, connecting said signal conditioning
18 means with the one of said fuze and guidance control
19 sections utilized in a missile firing, for receiving

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20 and selectively routing said characteristic telemetry
21 signals produced by said one utilized combination
22 to predetermined locations in said signal conditioning
23 means;

24 a commutator having said processed telemetry signals
25 produced by said signal conditioning means as an input,
26 said commutator producing a discrete sequence of signals
27 in response to receipt of said processed telemetry
28 signals, said discrete sequence of signals reflecting
29 the operation of said utilized fuze and guidance section
30 combination; and

31 means for transmitting said discrete sequence of signals
32 produced by said commutator to a location remote from
33 said missile.

Claim 2

1 The telemetry system according to claim 1 wherein said
2 interface means comprises a plurality of programming connector
3 cables equal in number to said plurality of missile configurations,
4 each of said plurality of connector cables being compatible
5 for use with and providing unique routing for the telemetry
6 signals characteristic of and produced by one of said fuze
7 and guidance section combinations, the appropriate one

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8 of said plurality of programming connector cables being
9 selected for use in a missile firing in accordance with
10 the one of said plurality of missile configurations fired.

Claim 3

1 The telemetry system according to claim 2 wherein said
2 signal conditioning means is a printed circuit card assembly
3 connected to a first connector by a wire bundle and wherein
4 each of said programming connector cables includes a connector
5 compatible for mating with said first connector, the mating
6 of said first connector with the compatible connector of
7 a connector cable completing a plurality of electrical
8 paths between a utilized fuze and guidance section and
9 said circuit card assembly, a different portion of said
10 electrical paths being utilized dependent on the one of
11 said plurality of connector cables with which said first
12 connector is mated, said circuit card including a plurality
13 of subcircuits, a predetermined portion of said subcircuits
14 being dedicated subcircuits utilized in conjunction with
15 only one of said missile configurations and a predetermined
16 portion of said subcircuits being common subcircuits utilized
17 in conjunction with more than one of said missile configurations,
18 each of said subcircuits receiving, in use, a telemetric
19 input signal along at least one of said electrical paths

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20 and processsing said received signal to reflect a facet
21 of operation of one of said fuze and guidance section
22 combinations.

Claim 4

1 The telemetry system according to claim 3 further comprising
2 a mounting frame, an on-board energy source and a power
3 supply, said commutator, energy source, power supply, signal
4 conditioning means and means for transmitting said commutator
5 produced signals all being mounted on said mounting frame
6 and said commutator, said energy source, said power supply
7 and said means for transmitting all being connected to
8 said signal conditioning by pin connectors.

Claim 5

1 The telemetry system according to claim 4 wherein said
2 energy source is a thermal battery and said commutator
3 is a pulse-amplitude modulated commutator.